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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/550,418

09/20/2005

Richard Munro Dorward

P/63803

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EXAMINER

BELLO, AGUSTIN

ART UNIT

PAPER NUMBER

2613

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
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3 MONTHS

12/28/2006

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

**Office Action Summary**

Application No.

10/550,418

Applicant(s)

DORWARD, RICHARD MUNRO

Examiner

Agustin Bello

Art Unit

2613

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 17-32 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 17-32 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received..

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 9/20/05.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_.

## DETAILED ACTION

### *Claim Rejections - 35 USC § 101*

1. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

2. Claims 17-32 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Claims 17-32 claim both an apparatus and the method steps of using the apparatus resulting in a hybrid claim. The claim is directed to neither a “process” nor a “machine,” but rather embraces or overlaps two different statutory classes of invention set forth in 35 USC 101 which is drafted so as to set forth the statutory classes of invention in the alternative only.

### *Claim Rejections - 35 USC § 112*

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 17-32 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claims 17-32 claims both an apparatus and the method steps of using the apparatus resulting in an ambiguous hybrid claim. Such claims have been held indefinite under 35 USC 112, second paragraph. *Ex parte Lyell* 17 USPQ2d 1548 (Bd. Pat. App. & Inter. 1990).
5. Claims 18-19 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

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6. Where applicant acts as his or her own lexicographer to specifically define a term of a claim contrary to its ordinary meaning, the written description must clearly redefine the claim term and set forth the uncommon definition so as to put one reasonably skilled in the art on notice that the applicant intended to so redefine that claim term. *Process Control Corp. v. HydReclaim Corp.*, 190 F.3d 1350, 1357, 52 USPQ2d 1029, 1033 (Fed. Cir. 1999). The term “receiver” in claim 18 is used by the claim to mean “transmitter”, while the accepted meaning is “receiver.” The term is indefinite because the specification does not clearly redefine the term.

***Claim Rejections - 35 USC § 102***

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

9. Claims 17-19 and 27-32, *as best understood in view of the 35 USC §101 and 35 USC §112 rejection above*, are rejected under 35 U.S.C. 102(e) as being anticipated by Sakamoto (U.S. Patent No. 6,577,385).

Regarding claim 17, Sakamoto teaches introducing at least one optical signal (reference numeral 32a in Figure 6) into the optical fiber cable (reference numeral F in Figure 6) at the first point thereof; using the optical fiber cable to carry the at least one optical signal to the second point thereof (reference numeral 32b in Figure 6) ; and configuring the OTDR (reference numeral 31 in Figure 6) to detect the at least one optical signal from the optical fiber cable and to

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prevent emission of the OTDR signals at any time during which detection of the at least one optical signal occurs (column 2 lines 59-63).

Regarding claim 18, Sakamoto teaches that the optical component comprises an optical receiver (reference numeral 30 in Figure 6), and in which the introducing step is performed by arranging the optical receiver to introduce the at least one optical signal into the optical fiber cable.

Regarding claim 19, Sakamoto teaches arranging step is performed by providing the optical receiver with a transmitting device (reference numeral 32a in Figure 6), and the step of transmitting the at least one optical signal from the transmitting device into the optical fiber cable (reference numeral F in Figure 6).

Regarding claim 27, Sakamoto teaches that the OTDR comprises a transmitter operated to emit OTDR signals (reference numeral 2a in Figure 1).

Regarding claim 28, Sakamoto teaches that the step of disabling the OTDR transmitter to prevent emission of the OTDR signals at any time during which detection of the at least one optical signal occurs (column 2 lines 59-63).

Regarding claim 29, Sakamoto teaches that the OTDR comprises a detector (reference numeral 4 in Figure 1) operated to detect the at least one optical signal from the optical fiber cable.

Regarding claim 30, Sakamoto inherently teaches that the OTDR detector is able to detect the at least one optical signal in a wavelength range of approximately 1250 nm to approximately 1700 nm (e.g. the most common communication wavelength range).

Regarding claims 31 and 32, Sakamoto teaches that the OTDR detector is used to receive echoes of the OTDR signals (inherent in OTDR).

***Claim Rejections - 35 USC § 103***

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claims 20-21, *as best understood in view of the 35 USC §101 and 35 USC §112 rejection above*, are rejected under 35 U.S.C. 103(a) as being unpatentable over Sakamoto in view of Shigematsu (U.S. Patent No. 5,214,728).

Regarding claims 20-21, Sakamoto differs from the claimed invention in that Sakamoto fails to specifically teach that optical component comprises a receive erbium doped fiber amplifier (EDFA), and in which the introducing step is performed by arranging the receive EDFA to introduce the at least one optical signal into the optical fiber cable, where the arranging step is performed by controlling isolation of an input isolator of the receive EDFA such that, in the absence of an input signal thereto, the at least one optical signal in the form of amplified spontaneous emission noise escapes from an input of the receive EDFA and is introduced into the optical fiber cable. However, Shigematsu teaches that the use of EDFA with an input isolator in optical communication system is well known in the art. Furthermore, there being no physical difference between what is claimed and what is taught by Shigematsu, one skilled in the art would clearly have had the ability to arrange the EDFA in order to control the isolation of the input isolator as claimed in order to introduce a signal into the fiber in the

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form of ASE. Therefore, it would have been obvious to one skilled in the art at the time the invention was made to employ the isolator EDFA combination as taught by Shigematsu in the system of Sakamoto.

12. Claims 22-26, *as best understood in view of the 35 USC §101 and 35 USC §112 rejection above*, are rejected under 35 U.S.C. 103(a) as being unpatentable over Sakamoto in view of Mock (U.S. Patent No. 5,790,285).

Regarding claims 22 and 23, Sakamoto differs from the claimed invention in that Sakamoto fails to specifically teach that introducing step is performed by superimposing a plurality of optical signals onto the optical fiber cable. However, Mock teaches that multiplexing of a plurality of optical signals onto a fiber is well known in the art (Figure 2). One skilled in the art would have been motivated to multiplex a plurality of signals onto an optical fiber in order to increase the amount of information transmittable on the fiber. Therefore, it would have been obvious to one skilled in the art at the time the invention was made to multiplex a plurality of optical signals onto an optical fiber.

Regarding claims 24-26, the combination of Sakamoto and Mock teaches multiplexing of a plurality of different wavelength optical signals onto a fiber, but differs from the claimed invention in that it fails to specifically teach that the multiplexed optical signals are pilot signals at wavelength different from the traffic signal wavelengths or optical service channels. However, Official Notice is given that multiplexing of a plurality of pilot signals at wavelength different from that of traffic signals onto an optical fiber is also well known in the art as is multiplexing a plurality of optical service channels onto a fiber. Therefore, it would have been obvious to one skilled in the art at the time the invention was made to multiplex a plurality of

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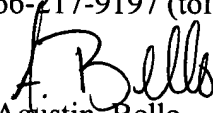
pilot signals at wavelength different from that of traffic signals or optical service channels onto an optical fiber.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Agustin Bello whose telephone number is (571) 272-3026. The examiner can normally be reached on M-F 8:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan can be reached on (571)272-3022. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Agustin Bello  
Primary Examiner  
Art Unit 2613

AB